

IN THE CLAIMS

Claims 1 - 48 (Canceled)

49. (New) A wire comprising:

a conductor extending along a longitudinal axis, an insulation surrounding the conductor and at least one first channel in the insulation extending generally along the longitudinal axis to form an insulated conductor, wherein an outer peripheral surface of the conductor forms one side of the at least one first channel, the at least one first channel containing a gas having a dielectric constant that differs from a dielectric constant of the insulation.

50. (New) The wire of claim 49, wherein the insulated conductor has an overall dielectric constant of less than 2.0.

51. (New) The wire of claim 49, wherein the at least one first channel contains air.

52. (New) The wire of claim 49, wherein the at least one first channel is a plurality of first channels.

53. (New) The wire of claim 52, wherein no one of the plurality of first channels has a cross-sectional area greater than about 30% of a cross-sectional area of the insulation.

54. (New) The wire of claim 49, wherein the insulation fully surrounds at least one second channel separate from the at least one first channel.

55. (New) The wire of claim 49, wherein the at least one first channel has a cross-sectional area of at least $2.0 \times 10^{-5} \text{ in}^2$.

56. (New) The wire of claim 49, further comprising an outer jacket surrounding the insulation.

57. (New) The wire of claim 49, wherein the insulated conductor has a diameter of less than about 0.042 in.

58. (New) The wire of claim 57, wherein the insulation has a thickness of less than about 0.010 in.

59. (New) The wire of claim 49, wherein said wire comprises first and second said insulated conductor which are twisted together to form a twisted pair.

60. (New) The wire of claim 59, wherein a delay skew is no greater than 15 ns between said first and second insulated conductor.

61. (New) The wire of claim 59, further including a plurality of the twisted pair.

62. (New) The wire of claim 61, further comprising an outer jacket surrounding the plurality of twisted pair.

63. (New) The wire of claim 61, wherein each of the twisted pair includes a shield.

64. (New) The wire of claim 61, wherein a delay skew is no greater than 15 ns between individual ones of the twisted pair.

65. (New) The wire of claim 49, wherein the conductor is solid copper.

66. (New) The wire of claim 49, wherein the insulated conductor passes a test selected from the group consisting of NFPA 255, NFPA 259, NFPA 262 or combinations thereof.

67. (New) The wire of claim 66, wherein the insulated conductor passes all of NFPA 255, NFPA 259 and NFPA 262.

68. (New) The wire of claim 49, wherein the insulated conductor generates at least 10% less smoke when burned according to a UL 910 Steiner Tunnel test when compared to an insulated conductor without channels in its insulation.

69. (New) The wire of claim 49, wherein the insulated conductor spreads flame at a rate at least 10% slower when burned according to a UL 910 Steiner Tunnel test when compared to an insulated conductor without channels in its insulation.

70. (New) An insulated conductor comprising:
a conductor having a length; and
an insulation surrounding the conductor and having substantially the same length as the conductor,
wherein the insulation includes at least one first channel that extends generally the length of the conductor and wherein an outer peripheral surface of the conductor forms one side of the at least one first channel, a material in the at least one first channel being a gas in contact with the conductor.

71. (New) The wire of claim 70, wherein the first signal speed differs from the second signal speed by less than about 15 ns.

72. (New) A communication wire for transmitting data and other signals comprising a conductor including an outer peripheral surface and an insulation surrounding the conductor to form an insulated conductor wherein the insulation includes at least one portion spaced from the outer peripheral surface, and wherein first and second said insulated conductor are twisted together to form a twisted pair, a gas contained within the at least one spaced portion of each of the insulated conductor.

73. (New) The wire of claim 49, wherein the gas is unassociated with closed-cell gas pockets.

74. (New) The wire of claim 49, wherein the gas is in contact with the conductor.

75. (New) The wire of claim 49, wherein the gas has a dielectric constant of approximately one.

76. (New) The wire of claim 61, wherein the cross-sectional area of the at least one first channel for a first of the twisted pair is different than the at least one first channel for a second of the twisted pair to reduce delay skew between them.